

1                                    ABSTRACT OF THE DISCLOSURE

2            The present invention pertains to a more efficient system and method for forming  
3    rectifying junction contacts in PIN alloy-semiconductor devices using photoelectrical and  
4    chemical etching. The present invention provides a means of creating rectifying junction  
5    contacts on alloy-semiconductor devices such as CdTe and CdZnTe, among others. In addition,  
6    the present invention also provides a simple and low cost method for revealing wafer surface  
7    morphology of alloy-semiconductors, thus providing an efficient and effective means for  
8    selecting single grain semiconductor substrates. Further, the present invention provides  
9    radiation detectors employing such alloy-semiconductor devices having improved rectifying  
10   junctions as the detector element.